# A university begins year 1 with 80 faculty essay sample 

Finance

## ASSIGN BUSTER

They hire 4 faculty each year. During each year 10\% (rounded to the nearest integer) of the faculty present at the beginning of the year leave the university. For example, in a year where there are 73 faculty at the beginning of the year, 7 would leave the university at the end of the year. The university wants to know how many faculty they will have at the end of year 10. The resulting spreadsheet can be found below. The formula copied down from E10 to E11: E18 was _ Answer:

B9: B18 - ROUND(0.1*B9: B18, 0) +C9: C18
Note: If the answer is a formula, there is no need to begin that answer with =. Please do not put any unnecessary spaces or () in your response.

You would like to show how the number of faculty at the end of year 10 depends on the quit rate and number of annual hires. We would like for example, to have cell L 10 give the number of Year 10 faculty if we hire 1 faculty member a year and 10\% quit each year. Using the information in the spreadsheets below, what would be the row input cell for a two-way data table? Answer:

## E3, E4

Note: If the answer is a formula, there is no need to begin that answer with $=$. Please do not put any unnecessary spaces or () in your response.

You would like to show how the number of faculty at the end of year 10 depends on the quit rate and number of annual hires. We would like for example, to have cell L10 give the number of Year 10 faculty if we hire 1 faculty member a year and $10 \%$ quit each year. Using the information in the
spreadsheets below, what would be the column input cell for the two-way data table? Answer:

E9: E18

Please do not put any unnecessary spaces or () in your response.

You would like to show how the number of faculty at the end of year 10 depends on the quit rate and number of annual hires. We would like for example, to have cell L10 give the number of ending Year 10 faculty if we hire 1 faculty member a year and 10\% quit each year. Using the information in the spreadsheets below, what formula would be entered in cell J9? Answer:

B9: B18 - ROUND(0. 1*B9: B18, 0) +1
Please do not put any unnecessary spaces or () in your response.

Consider the cash flows seen here. If we discount cash flows at 10\% per year, the Net Present Value (rounded to the nearest dollar) of these cash flows as of $4 / 10 / 2011$ is $\$ 595$ $\qquad$ .

Consider the cash flows seen here. The Internal Rate of return on the cash flows of Problem 26 (rounded to the nearest 1\%) is $\qquad$ 34\% $\qquad$ . Enter just the number; e. g., 18\%

Suppose in Problem 40 we want to highlight the year number for each year during which sales were at least $5 \%$ higher than the previous year. We would begin by selecting the cell range D6: D12 and choose Conditional Formatting from the Ribbon. Then you would select new rules followed by the Use a Formula option. Finally you would enter the following formula.
$(E 5 / E 4)>1.05$
(\$E\$6/E5)> 1.05
$(E 6 / E 5)>1.05$
(E6/E5)>. 05

Answer
$(E 6 / E 5)>1.05$

Suppose you have listed Le Napoleon's monthly sales of pear tortes in a twelve-sheet workbook. The first worksheet contains January sales, the second worksheet February sales, etc. The pear torte sales are always listed in cell F7. What multi-sheet (three-dimensional) formula would give the total pear torte sales for the months March-July, inclusive? Assume that each worksheet is named with the month name only, spelled out in full. Include the equal sign at the beginning-for example, $=\operatorname{SUM}(\mathrm{A} 1: \mathrm{A} 24)$-but do not include any unnecessary spaces or parentheses in your response. Also do not anchor any cells-i. e., do not use any \$ characters. Answer
$=$ SUM(March! F7, April! F7, May! F7, July! F7)

